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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,301	08/22/2003	Scott W. Altmann	JB01603K1	9573

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SCHERING-PLOUGH CORPORATION
PATENT DEPARTMENT (K-6-1, 1990)
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EXAMINER	
PARAS JR, PETER	
ART UNIT	**PAPER NUMBER**
1632	

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,301	ALTMANN ET AL.	
	Examiner	Art Unit	
	Peter Paras, Jr.	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-44* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-44 are pending.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-2, drawn to an isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2 (rat), classified in class 530, subclass 350.

II. Claims 1-2, drawn to an isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 12 (mouse), classified in class 530, subclass 350.

III. Claims 3-6 and 9-10, drawn to an isolated polynucleotide comprising the nucleotide sequence set forth in SEQ ID NO: 1 (rat), a vector comprising the same polynucleotide, a host cell comprising the same vector, and a method of producing a polypeptide comprising the same host cell, classified in classes 536, 435, 435, and 435 subclasses 23.1, 320.1, 325, 70.1.

IV. Claims 3-6 and 9-10, drawn to an isolated polynucleotide comprising the nucleotide sequence set forth in SEQ ID NO: 11 (mouse), a vector comprising the same polynucleotide, a host cell comprising the same vector, and a method of producing a polypeptide comprising the same host cell, classified in classes 536, 435, 435, and 435 subclasses 23.1, 320.1, 325, 70.1.

V. Claims 7-8, drawn to antibody that binds to the amino acid sequence set forth in SEQ ID NO: 39, classified in class 503, subclass 388.1.

VI. Claims 7-8, drawn to antibody that binds to the amino acid sequence set forth in SEQ ID NO: 40, classified in class 503, subclass 388.1.

VII. Claims 7-8, drawn to antibody that binds to the amino acid sequence set forth in SEQ ID NO: 41, classified in class 503, subclass 388.1.

VIII. Claims 7-8, drawn to antibody that binds to the amino acid sequence set forth in SEQ ID NO: 42, classified in class 503, subclass 388.1.

IX. Claims 11-15 and 19-20, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2 (rat) with a test agent in the presence of ezetimibe, classified in class 435, subclass 7.2.

X. Claims 11-15 and 19-20, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 4 (human) with a test agent in the presence of ezetimibe, classified in class 435, subclass 7.2.

XI. Claims 11-15 and 19-20, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 12 (mouse) with a test agent in the presence of ezetimibe, classified in class 435, subclass 7.2.

XII Claims 16-18 and 21, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the

amino acid sequence set forth in SEQ ID NO: 2 (rat) with a test agent in the presence of cholesterol, classified in class 435, subclass 7.2.

XIII Claims 16-18 and 21, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 4 (human) with a test agent in the presence of cholesterol, classified in class 435, subclass 7.2.

XIV Claims 16-18 and 21, drawn to a method of identifying an antagonist comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 12 (mouse) with a test agent in the presence of cholesterol, classified in class 435, subclass 7.2.

XV. Claim 22-29, drawn to a mutant mouse comprising a homozygous disruption of endogenous, chromosomal NPC1L1, offspring of the mutant mouse, and a method of screening using the same mouse, classified in classes 800 and 800, subclasses 18 and 3.

XVI. Claims 30-33, drawn to methods for inhibiting NPC1L1 mediated sterol or 5α stanol uptake by administering an unidentified substance, is unclassifiable since the substance is unidentified.

XVII. Claims 34-38, drawn to a kit comprising ezetimibe, classified in class 514, subclass 284.

XVIII. Claims 39-42, drawn to a method for decreasing the level of intestinal sterol or 5a-stanol absorption in a subject by reducing the level of NPC1L1 expression, classified in class 514, subclass 44.

XIX. Claim 43, drawn to a method for identifying an antagonist of NPC1L1 comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2 (rat) with a test agent in the presence of 2-azetidinone, classified in class 435, subclass 7.2.

XX. Claim 43, drawn to a method for identifying an antagonist of NPC1L1 comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 4 (human) with a test agent in the presence of 2-azetidinone, classified in class 435, subclass 7.2.

XXI. Claim 43, drawn to a method for identifying an antagonist of NPC1L1 comprising contacting a host cell expressing a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 12 (mouse) with a test agent in the presence of 2-azetidinone, classified in class 435, subclass 7.2.

XXII. Claim 44, drawn to a kit comprising 2-azetidinone, classified in class 546, subclass 272.4.

It is noted that the invention is directed to different nucleotide sequences having different structures, each from the other, and the polypeptides encoded by the nucleotide sequences. The claims were grouped accordingly (see above) as to separate the various sequences (nucleotide and polypeptide). A search of any one of the claimed sequences would not be co-extensive to the others.

Inventions I and II are patentably distinct each from the other. Inventions are patentably distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are structurally different polypeptides from different rodent species, which are not capable of use together. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Inventions III and IV are patentably distinct each from the other. Inventions are patentably distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are structurally different polynucleotides from different rodent species, which are not capable of use together. Because these inventions are distinct for the reasons given above and the search required for Group III is not required for Group IV, restriction for examination purposes as indicated is proper.

Inventions V-VIII are patentably distinct each from the other. Inventions are patentably distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are structurally different antibodies as they recognize and bind to different amino acid sequences, which are not capable of use together. Because these inventions are

distinct for the reasons given above and the search required for each of the groups is not co-extensive to the others, restriction for examination purposes as indicated is proper.

Inventions [I-II] and [III-IV] and [V-VIII] and [XV] and [XVII] and [XXII] are patentably distinct each from the other. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are different products (polynucleotides, polypeptides, antibodies, and mutant mouse) that are not capable of use together and have different functions. For example, the polypeptides of Groups I-II can be used to screen agents in a cell-free assay, the polynucleotides of Groups III-IV can be used as probes in hybridization assay *in vitro*, and the antibodies of Groups V-VIII can be used to detect a protein in a cell *in vitro*, the mutant mouse of Group XV can be used as a disease model, and the kits of Groups XVII and XXII each comprising a structurally different compound may be used for reducing sterol or stanol absorption. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and separate search requirement, restriction for examination purposes as indicated is proper.

Inventions [IX-XIV and XVI and XVIII-XXI] are patentably distinct each from the other. Inventions are patentably distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different

inventions are materially different methods for identifying antagonists of NPC1L1 that are not capable of use together. First, the methods of Groups IX-XI are directed to methods that require the use of exetimibe while the methods of Groups XII-XIV or Groups XIX-XXII require cholesterol or azetidinone, respectively, for practice. Next, each of the different methods is separated on the basis of requirement of structurally different sequences for practice. For example, Group IX requires expression of SEQ ID NO: 2, Group X requires expression of SEQ ID NO: 4, etc. Finally, the method of Group XVIII is directed to decreasing the level of NPC1L1 expression and could be practiced by gene therapy while the methods of Group XVI are directed to inhibiting NPC1L1 mediated sterol or stanol uptake by an unidentified compound. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and separate search requirement, restriction for examination purposes as indicated is proper.

Inventions [IX-XIV and XVI and XVIII-XXI] and [I-VIII and XV and XVII and XXII] are patentably distinct each from the other. Inventions are patentably distinct if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are directed to methods and products, which are not used together and have different functions. For example, the methods of Groups [IX-XIV and XIX-XXI] are cell-based screening assays for identifying antagonists of NPC1L1; and the methods of Groups [XVI and XVIII] are directed to reducing the level of NPC1L1 mediated uptake of sterol or stanol; while the

polypeptides of Groups I-II may be used to produce antibodies in an animal; the polynucleotides of Groups III-IV may be used to as probes in a hybridization assay in vitro, the antibodies of Groups V-VIII may be used to purify proteins; the mutant mouse of Group XV may be used as a disease model.; and the kits of Groups XVII and XXII each comprising a structurally different compound may be used for reducing sterol or stanol absorption. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and separate search requirement, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Paras, Jr. whose telephone number is 571-272-4517. The examiner can normally be reached on M-Th, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inquiries of a general nature or relating to the status of the application should be directed to Dianiece Jacobs whose telephone number is (571) 272-0532.

Peter Paras, Jr.
PETER PARAS, JR.
PRIMARY EXAMINER
Art Unit 1632